

## ABSTRACT

A resonator for damping pressure waves or instabilities in a system supported by acoustic energy wherein the resonator adopts the use of counter-bored openings on the downstream side of the resonator within the flow path of the system. The resonator includes a first member and a second member where the second member includes a plurality of openings therethrough with each hole having a counter-bore on its upstream side. The first member has a size substantially smaller than the diameter of said flow path and a first plurality of openings therethrough. The openings are in fluid communication with the flow path. The second member has a size generally equal to the first member and a second plurality of openings therethrough, which openings are in fluid communication with the flow path.